



Quick Reference Guide



Programmable Digital Timer (H3PT)

ELECTRONIC AUTOMATION (P) LTD

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INTRODUCTION

Thank you for purchasing EAPL'S Programmable Digital Timer. This instruction manual describes every aspect of installation, set-up, and operation of the Programmable Digital Timer. If you run into difficulties and need technical assistance, feel free to call our technical support at (080) 28567561 available between 9 AM – 5:30PM IST or visit our web site at www.eaplindia.com.

EAPL, an ISO 9001 company, leaders in Timer Technology Brings to you a new range of micro controller based programmable timers. High reliability, accuracy, compactness are some of the striking design features.

Uncompromising quality with cost effectiveness has been the watchword at EAPL.

For Customer Use

Enter below the serial Number which is located on the timer cabinet. Retain this information for future reference.

Model No:

Serial No:

Batch No:

Date of Purchase:

Purchase Point:

Accessories

- Programmable Digital Timer - 1 no.
- Quick reference guide

NOTE: Please acknowledge that we reserve the right to make changes in product performance or specifications without prior notice. Also please note that we bear no responsibility for mistakes, misprints or omissions of the instruction manual Specifications.

Salient Features of H3PT

- 48mm x 48mm enclosure for panel mounting.
- On – Delay adjustable up to 99 hrs and 59 mins. Minimum time is 0.1sec.
- Dual digital display for set value and process value separately.
- Programs enable and disable facility.
- External start signal to initiate the timing.
- Hold & Restart facility during the power failure condition.

Ordering Information

| Model | Function | Source Voltage | Time Range |
|-------|-------------------------------------|--------------------|----------------------------|
| H3PT | Programmable digital On delay Timer | 110V AC to 240V AC | 0.10 sec to 99 hrs 59 mins |

Special Features of H3PT

HOLD: When the timer is in operations and the HOLD is in ON condition, upon failure of power, the timer retains the data and executes the balance on resumption of power. A fresh start signal is not required in this case.

RESTART: When the timer is in operation and the Hold is in OFF condition, upon failure of power the timer waits for a fresh start signal to operate on resumption of power.

PROGRAM ENABLE/DISABLE: By shorting terminal 1 & 2 (potential free shorting) the program mode is enabled. Once the programming is complete, the shorting can be removed in order to lock the timer from tampering the programmed settings.

EXTERNAL START: By shorting terminals 1 & 3 for a minimum of 250mSecs, the timing can be initiated externally. After the end of one cycle, timing can be initiated again by shorting 1 & 3 for minimum 250 m Secs.

Specification for H3PT

| Operating Voltage Range | - 10% to + 10% of rated voltage | | | | | | | | | | | | |
|--------------------------------------|---|---------------|-----|-----|-----|---------|-----------|-----|-------|-----------|-----|-------|---------------|
| Rated frequency | 50 Hz \pm 5% | | | | | | | | | | | | |
| Power consumption | 4 VA / 1W | | | | | | | | | | | | |
| Control output | 1 c/o rated for 5A@ 250V AC/28V DC, Resistive load | | | | | | | | | | | | |
| Time range | 0.10 sec to 99hr 59min. | | | | | | | | | | | | |
| Setting Accuracy | \pm 1% \pm 50 m sec | | | | | | | | | | | | |
| Repeat Accuracy | \pm 0.05% max \pm 50 msec | | | | | | | | | | | | |
| Start & Reset Signal | 250msec minimum | | | | | | | | | | | | |
| Recovery Time | 2sec. minimum | | | | | | | | | | | | |
| Variation due to volt. change | \pm 1% max \pm 100 msec. | | | | | | | | | | | | |
| Variation due to temp. change | \pm 2% max \pm 100 msec. | | | | | | | | | | | | |
| Variation due to freq .change | \pm 1% max \pm 100 msec | | | | | | | | | | | | |
| Ambient Temperature | Operating: - 10 degree C to + 55 degree C Storage : - 25 degree C to + 80 degree C | | | | | | | | | | | | |
| Humidity | Max. 85% RH @ 40 degree C | | | | | | | | | | | | |
| Service Life | 10 ⁶ operations minimum under no load | | | | | | | | | | | | |
| Electrical Life | 10 ⁵ Operations minimum with full load | | | | | | | | | | | | |
| Range Selection | <table border="1"> <thead> <tr> <th>Range</th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>S/S</td> <td>0.1 sec</td> <td>59.99 sec</td> </tr> <tr> <td>M/S</td> <td>1 sec</td> <td>59.59 min</td> </tr> <tr> <td>H/M</td> <td>1 min</td> <td>99 hrs 59 min</td> </tr> </tbody> </table> | Range | Min | Max | S/S | 0.1 sec | 59.99 sec | M/S | 1 sec | 59.59 min | H/M | 1 min | 99 hrs 59 min |
| Range | Min | Max | | | | | | | | | | | |
| S/S | 0.1 sec | 59.99 sec | | | | | | | | | | | |
| M/S | 1 sec | 59.59 min | | | | | | | | | | | |
| H/M | 1 min | 99 hrs 59 min | | | | | | | | | | | |
| Insulation Resistance | >100M ohms @ 500V DC | | | | | | | | | | | | |
| Dielectric Strength | 01)2.5KV AC,50Hz FOR 1 Minute.(between current carrying & non-current carrying parts) 02)1.5KV AC,50Hz for 1 Minute.(between contacts & control circuit) 03)1KV AC ,50Hz for 1 Minute.(between non-continuous relay contacts) | | | | | | | | | | | | |
| Dimensions | 48 x 48 x 105 mm [W x H x D] | | | | | | | | | | | | |
| Connections | Screw type terminals with self lifting clamps | | | | | | | | | | | | |
| Rated frequency of operation | 1800 \pm 5% operations per hour max | | | | | | | | | | | | |

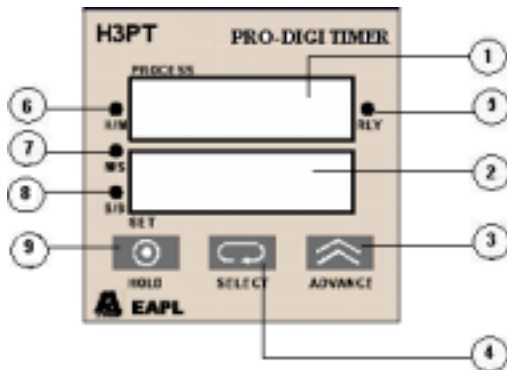
Operating Instructions



Caution

- Application of voltage other than the specified one will permanently damage the timer

Front Panel of H3PT

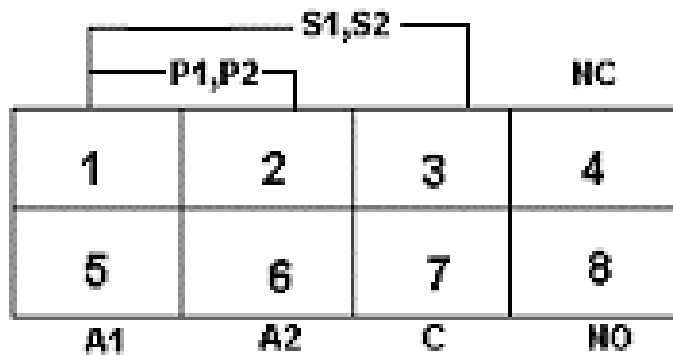


- 1 **PROCESS:** Displays the process value.
- 2 **SET:** Displays the set value.
- 3 **ADVANCE:** This button is used to roll the selected digit while programming.
- 4 **SELECT:** This button is used to select the particular digit while programming.
- 5 **RELAY LED:** Indicates the relay status when the relay changeover takes place.
- 6 **H/M LED:** Hour/Minute selection
- 7 **M/S LED:** Minute/Second selection
- 8 **S/S LED:** Second/Second Selection
- 9 **HOLD:** To select HOLD or RESTART mode

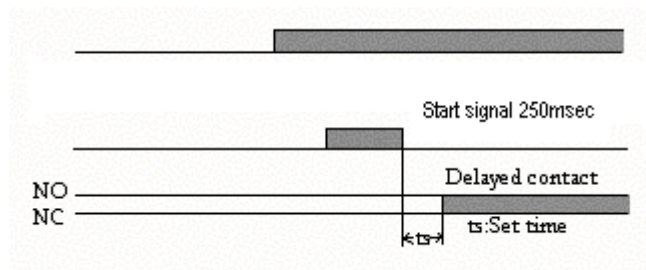
Terminal Details For H3PT

1 & 2 : Program enable/disable
 1 & 3 : External start contacts
 5, 6 : Source
 4, 7, 8 : NC, C, NO

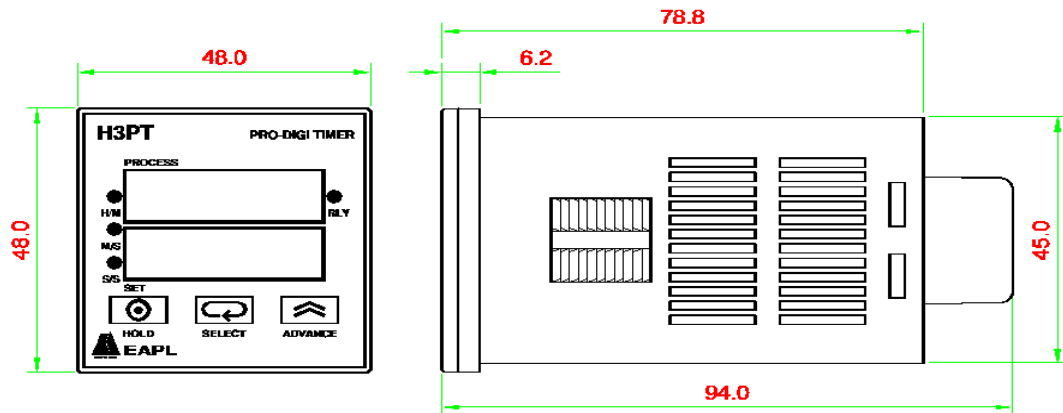
Connection Diagram For H3PT



Timing Diagram for H3PT



Dimension for H3PT



ALL DIMENSIONS IN mm.

How to Set Time For H3PT

- Short terminals 1 & 2. Apply rated voltage across terminal 5 & 6. On the front panel two keys have been provided namely SELECT & ADVANCE.
- By using the SELECT and ADVANCE button you can first select the desired time range (S/S M/S H/M) which is indicated through glowing of the relevant LED on the front panel. Next select the desired On-delay timing which is displayed on the "SET" display through seven segment display, using the SELECT and ADVANCE buttons. After selecting the required ON delay, press 'SELECT' once more to store the data.
- Remove the shorting across 1 & 2 to lock the program.
- Short 1 & 3 to initiate the timing cycle (Refer Special features)
- To restart next timing cycle, short 1 & 3 at the end of the cycle (Refer Special features)

NOTE:

In case, the On delay is programmed as 00:00 in any of the range (H/M or M/S or S/S) the SET display by default will show 00:10 after coming out of the program mode, indicating

that the minimum delay, which can be programmed is 0.1 Sec. The minimum time setting in respective range is as given below:

| Range | Delay |
|--------------|--------------|
| S/S | 0.1 Sec |
| M/S | 1 Sec |
| H/M | 1 Min |

How to operate the timer

- Connect rated power to terminals 5 & 6.
- Short terminals 1 & 3 (Refer special features) and initiate the timing.
- After the SET time, the delay contact (4,7,8) changes over and remains in that position till power is interrupted.